IN THE CLAIMS:

Claim 1 (Previously amended): A process for fabricating a shape memory alloy film, comprising: inserting a substrate in an enclosure; introducing a source of a shape memory alloy other than a Ni:Ti-based alloy into the enclosure; purging the enclosure such that substantially no reaction occurs between the shape memory alloy and the contaminants remaining within the enclosure after purging; introducing an inert gas such that the pressure within the enclosure is raised; setting an initial temperature of the source; depositing a film of shape memory alloy containing substantially no titanium from the source onto the substrate; controlling the temperature of the source such that the composition of the film has a compositional gradient through at least a portion of the thickness of the film, wherein the film is capable of exhibiting a two-way shape memory effect.

Claim 2 (previously amended): The process of claim 1, wherein the substrate is one of a three-dimensional sacrificial scaffold structure or a removable, three-dimensional scaffold structure and further comprising a step of eliminating the scaffold structure such that the film has a three-dimensional structure prior to any deformation processing of the film.

Claim 3 (original): The process of claim 1, wherein purging the enclosure includes evacuating the enclosure, wherein the vacuum pressure during evacuating is selected in a range greater than 10^{-8} Torr and no greater than 10^{-3} Torr.

Claim 4 (original): The process of claim 3, further comprising selecting a shape memory alloy for the source from the group of shape memory alloys consisting of Au:Cd, Fe:Mn:Si, Cu:Zn:Al, Cu:Ni:Al and higher order alloys based thereon.

Claim 5 (original): The process of claim 4, wherein the shape memory alloy is of Au:Cd or is a higher order alloy based on Au:Cd.

Claim 6 (original): The process of claim 4, wherein the shape memory alloy is of Fe:Mn:Si or is a higher order alloy based on Fe:Mn:Si, and the range of vacuum pressure is no greater than 10^{-5} Torr.

Claim 7 (original) The process of claim 4, wherein the shape memory alloy is of Cu:Zn:Al or is a higher order alloy based on Cu:Zn:Al, and the range of vacuum pressure is no greater than 10^{-6} Torr.

Claim 8 (original): The process of claim 4, wherein the shape memory alloy is of Cu:Ni:Al or is a higher order alloy based on Cu:Ni:Al, and the range of vacuum pressure is no greater than 10^{-6} Torr.

Claim 9 (original): The process of claim 3, wherein the step of controlling the temperature increases the temperature of the source gradually over time during deposition of the film.

Claim 10 (original): The process of claim 3, wherein the distance between the source and the substrate is greater than 2 cm and no greater than 24 cm.

Claim 11 (original): The process of claim 3, wherein the substrate is tubular, further comprising a step of rotationally adjusting the orientation of the substrate such that the film thickness is radially uniform about the rotational axis.

Claim 12 (previously amended): A shape memory effect actuator, comprising: a film comprising a shape memory alloy having substantially no titanium, the film having a film thickness and a compositional gradient through at least a portion of the film thickness such that a phase change occurs above a phase change temperature, wherein the phase change activates a two-way shape memory effect.

Claim 13 (original): The actuator of claim 12, wherein the actuator is a bubble membrane, the bubble membrane extending when heated above the phase change temperature and flattening when cooled below the phase change temperature.

Claim 14 (original): The actuator of claim 12, wherein the film comprises at least one linear element such that the at least one linear element is capable of activating a two-way shape memory effect.

Claim 15 (currently amended): A shape memory effect actuator, comprising: a film formed on a three-dimensional sacrificial scaffold structure or a three-dimensional removable scaffold structure having a three-dimensional shape such that the film has a three-dimensional shape prior to ~~amy~~ any deformation processing of the film and the film is comprised of a shape memory alloy, at least an operable portion of the film being capable of a two-way shape memory effect, the operable portion of the film having compositional gradient through at least a portion of the film such that a phase change occurs at a phase change temperature~~, such that change~~ and is capable of activating a two-way shape memory effect.

Claim 16 (original): The actuator of claim 15, wherein the three- dimensional shape of the film comprises a fenestrated tubular element.

Claim 17 (original): The actuator of claim 15, wherein the three- dimensional shape of the film comprises a porous foam.

Claim 18 (original): The actuator of claim 15, wherein the three- dimensional shape of the film comprises a dimpled spherical structure.

Claim 19 (previously amended): A film of shape memory alloy having substantially no titanium and comprising a compositional gradient through at least a portion of the film such that a phase change occurs above room temperature, wherein the phase change is capable of activating a two-way shape memory effect.

Claim 20 (original): The film of claim 17, wherein the shape memory alloy is selected from one of Au:Cd, Fe:Mn:Si, Cu:Zn:Al, Cu:Ni:Al and higher order alloys based thereon.

Claim 21 (previously added) The process of claim 5, wherein the distance between the source and the substrate is no greater than 15.2 cm.